

# Marine Physical Laboratory

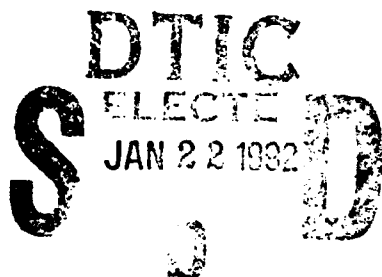
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## Acoustic Reverberation Experiment Planning

W. S. Hodgkiss and J. A. Hildebrand

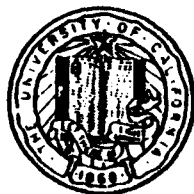


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## *Objective*

Detailed planning of surface and bottom reverberation experiments as part of the Office of Naval Research Acoustic Reverberation Special Research Program (ARSRP).

## *Approach and Accomplishments*

The Office of Naval Research initiated a series of acoustic reverberation planning meetings in FY89. As an outgrowth of these meetings, surface and bottom reverberation field measurement groups were formed in FY90 to engaged in the detailed planning of surface and bottom reverberation experiments. Dr. Hodgkiss met with the surface group and Dr. Hildebrand met with the bottom group.

The scientific plan for the surface reverberation component of the ARSRP has placed special emphasis on low grazing angle backscatter and high wind speed conditions in the 15-30 kt region [1]. An experiment plan proposing the collection of a high-quality, well-documented data set evolved out of extensive discussions [2].

Although seafloor scattered wavefields have been studied previously, many of the seafloor characteristics important to their understanding had not been measured concurrently. Scattering may vary spatially in the ocean due to variations in seafloor roughness, sediment cover, and water depth. The scientific plan for the bottom reverberation component of the ARSRP has placed special emphasis obtaining a detailed description of the bottom in the "natural laboratory" where acoustic experiments are to be conducted [3]. The SRP natural laboratory will provide a setting where adequate environmental control is available to understand the connection between seafloor characteristics and scattering characteristics.

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## References

### *References*

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- [1] "Research Plan for Air/Sea Boundary Acoustic Scattering" (June 1989).
- [2] "Meeting Report: IOS, British Columbia" (1-2 February 1990).
- [3] "Bottom/Subbottom Reverberation Science Plan" (13 June 1989).

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Scientific Officer Code: 1125OA (3)  
Marshall Orr  
Office of Naval Research  
800 North Quincy Street  
Arlington, VA 22217-5000

Administrative Grants Officer (1)  
Office of Naval Research  
Resident Representative N66018  
Administrative Contracting Officer  
University of California, San Diego  
(Mail Code 0234) 8603 La Jolla Shores Drive  
San Diego, CA 92093-0234

Director, Naval Research Laboratory (1)  
Atten: Code 2627  
Washington, D.C. 20375

Defense Technical Information Center (4)  
Building 5, Cameron Station  
Alexandria, VA 22314